

The painted designs vary among different individuals, but are fairly persistent for each. The prevailing design at Costa Rica in 1893 was that of the aged matron known as Juana Maria (plate XVIII), with variations in detail such as that exhibited by her unmarried daughter Candelaria (the Seri belle shown in plate XXIV); next in frequency were the designs, in white and red, exhibited by the matrons portrayed in plates XX and XXII. Other designs observed are indicated in plate XXVI. The variations in individual designs are apparently due either to varying care in the application of the paint or to the degree of obliteration by wear—a. g., the withered Juana Maria sometimes put on her design askew and was negligent of details, while the blooming Candelaria greatly elaborated the details of the pattern and carefully perfected the symmetry of the whole when preparing for her full-dress sitting before the camera (plate XXIV), so that her design was then gorgeous by contrast with the nearly obliterated blur of a half-hour before. The designs are renewed every few days, especially for ceremonious occasions, and hence are practically permanent.

When grouped in relation to their wearers, the designs are found to exhibit family connection. Thus, Juana Maria's design is repeated, with greater elaboration of detail and with a pair of supplementary marks, in that of her daughter Candelaria; the winged symbol of the Seri matron portrayed in plate XX is repeated with minor variations in that of her daughter, the Seri maiden pictured in plate XXV; while the symbols of the mother and infant daughter depicted in plate XV are essentially alike. It is noticeable, too, that in the nearly spontaneous arrangement of individuals in the group shown in plate XIII there is a tendency toward subgrouping by symbols; and it was constantly observed that the family groups gathered about particular jacales (such as that shown in plate XIV) displayed corresponding designs, though there were frequent visitors from neighboring jacales bearing other designs. Briefly, all the observed facts, as well as the supplementary information gained by inquiry, indicate that the designs are hereditary in the female line, but are susceptible of slight modification both in elaborateness of detail and in the addition of minor supplementary features.

The principal apparatus and materials used in the face-painting are illustrated in plate XXVII. The chief pigments are ocher, gypsum, and the rare mineral dumortierite; the ocher yields various shades of red, ranging from pink to brown; the gypsum affords the white used in most of the designs; while the dumortierite is the source of the slightly varying tints of blue. So far as was observed, the pigments are not blended by mixing, though there is some bleeding due to overlapping in application. The ocher is commonly extracted and transported as lumps of ochereous clay or ochereous gypsum (plate XXVII, figures 1 and 5), though it is sometimes reduced to powder and transported in bits of skin or rag, or in cylinders of cane (plate XXVII, figures 3 and 4); and it is

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386 prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scaper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metastate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on Tibarón Island in 1895 were smeared with grease, it is probable that either water or fat may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her device on the faces of her daughters up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

317 The mines yielding the pigments were not located. The geologic conditions are such that the others are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and applied, the fact that they are indispensable feminine appurtenances even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

302 The sematic functions of the designs are esoteric, yet an inkling of their meaning was obtained through Mashém, the interpreter at Costa Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

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OBLIGATIONS OF THE CHIEF

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holle weapon, the counterfeit cartridge, the imitation machete, or other charm against alien power; it is usually he who wears the white man's hat or random garment in lieu of the deer or lion mask of earlier days; and during recent years his most-prized fetish, and one which practically insures the support of his fellows, is a written certificate of his chiefship from Señor Encinas, or, still better, from El Gobernador at Hermonillo. Yet he is a throneless and even homeless potentate, sojourning, like the rest of his fellows, in such jacales as his two or three or four wives may erect, wandering with season and alisterly whim, chased often by rumors of invasion or by fearsome dreams, and restrained by convention even from chiding his own children in his wives' jacales save through the intercession of female relatives.

In 1804 the head chief was reported to be on Tiburon; the putative chief of the rancheria at Costa Rica was the taciturn giant known as El Mudo (plate XIX); while Mashim (or Juan Estorgu) was the head of one of the Pelican clans.

ADOPTION

One of the more important factors in demotic development among primitive peoples (probably second only to interclan marriage in extending sympathy and unifying law) is adoption; and special efforts were made to obtain data relating to the subject. Direct inquiries were futile, the responses indicating that the entire subject is foreign to the thought of the tribe; but three sporadic and measurably incongruous examples of quasi adoption are worthy of record.

The most specific case is that of Lieutenant Hardy, who visited Isla Tiburon in 1826, and was fortunate in gaining the confidence of the tribe through successful medical treatment of the wife of the chief. On his second landing he was greeted with many expressions of gratitude, which were especially exuberant on the part of the daughter of the family (always a personage in Seri custom), who insisted on painting his face. He specifies:

Not wishing to deny her the indulgence of this innocent frolic, I quietly suffered her to proceed. She mixed up part of a cake of blue color, which resembles ultramarine (and of which I have a specimen), in a small shell; in another, a white color, obtained by ground tale, and in a third was mixed a color obtained from the red flint-stone of the class which I before stated was to be found on Seal Island, and resembled cinnabar. With the assistance of a pointed stick the tender artist formed perpendicular narrow stripes down my cheeks and nose, at such distances apart as to admit of an equally narrow white line between them. With equal delicacy and skill the tops and bottoms of the white lines were finished off with a white spot. If the cartilage of my nose at the nostrils had been perforated so as to admit a small, round, white bone, five inches in length, tapering off at both ends and rigged something like a cross-jack yard, I might have been mistaken for a native of the island. As soon as the operation was finished, the whole party set up a roar of merry laughter, and called me "Hernando, Capitan Tiburou," being the very limited extent of their knowledge of Spanish.

ages (pp. 164-167), and Hardy's story of his being painted is interpreted as ceremonial adoption (pp. 277-8). My conviction is that the Seri paint primarily for adornment, and that further significance is either secondary or absent. When I reached the island and about thirty people, including visitors from other settlements, were gathered to receive and inspect me, all the younger women and one or two adolescent boys were freshly and very neatly painted. After all, their ragged cast-off civilized garments were nothing to make a show with on a state occasion. In former times, the everyday-wear pelican robes would not have served much better. The ochre red, dumortierite blue, and gypsum white pigments however gave a chance for decoration and display. Three days later, when our party was an old story, some of the faces still carried paint, but it was worn, defaced, and bedraggled. It seems unlikely that people should greet strangers by decorating themselves with representations of lineage totems which they at the same time denied or tried to conceal from their knowledge. The construal of Hardy's painting as an adoption-rite rests on the same blood-kin interpretation. It was probably nothing more than an act of friendliness tinged with the simple humor of which the Seri have a strong sense.

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Face painting in fact seems to be the chief if not only purely aesthetic expression of Seri culture, their mode of life and psycho-physiological habits being such as almost to prohibit any other form of art. In this painting, on the other hand, they have achieved a high degree of stylization and taste. The designs I saw were throughout in the manner illustrated by McGee in his plates 13-16, 18, 20, 22, 24-26.

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Ethnographically, the interest of this style lies in its similarity to the river Yuman face paintings. The Seri first of all specialize on a horizontal bar across the nose and cheeks, immediately below the eyes; in addition to this, there may be vertical elements dependent over the cheeks. The design deliberately breaks across the natural lines of the face in such a way as to orient itself with reference to the eyes without touching them. Bordering or enclosing of the eyes is avoided; neither are planes like the cheeks, forehead, or chin felt as fields to be filled in with decoration. The fundamental plan attacks the face at once drastically and subtly. That the style has both feeling and rigor is shown by the fact that none of the endless variations of color and design detail depart much from the basic scheme. That this scheme is old is shown by Hardy's description of a century ago. It is a true art of high order within its narrow compass.

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The Mohave paintings* are somewhat freer and more variable, but also less classical or chaste stylistically. The transverse element

* Kröeber, Handbook, BAE-N 78, Dec. 20-22, 1928. With the Mohave, contrary to the Seri, the vertical elements predominate over the horizontal. The Gila Pima style (Russell, pl. 38), and the Havasupai (Hpler, AMNH-AP 39 (192), 1928), are also related.

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FIG. 11. PAINTING THE FACE
USING A RED PIGMENT OBTAINED FROM THE TURBOTE.

223 lice-infested carcasses were then gathered
264 and brought to a central place among the
stinking rocks where a gluttonous feast was
held in the dark, the long ahungered tribes-
men gorging themselves with the soft entrails
and succulent parts, and carousing in the
carnage until overcome by slumber.

281 The day following the slaughter, the
294 matrons collected the carcasses with least
damaged plumage and carefully removed the
skins, which were then gnawed and sucked
clean of flesh and grease and dried in the
sun (Fig. 8). From two or more of these
skins they made a kilt or robe (Figs. 1, 2),
the principal apparel, not so much for pro-
tection from cold as from the scratch and
prick of the abounding spines and thorns of
Seriland. The skins were sewed with sinew
and often held in place on the body by a
283 cord made of human hair (Fig. 1). The
302 culture of their long, luxuriant hair, indeed,
was an important matter. They brushed
their hair regularly with a brush fashioned

[p. 200(A)]

222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 Perhaps the only germ of thriftiness in the
262 Seris is shown by a peculiar custom with
514 respect to the pitahayas. The fruits, eaten in
such enormous quantity, were imperfectly
digested, the hard-coated seeds particularly
passing through the body unchanged. Using
[45] large seashells, the feces containing these
[251] seeds were collected and preserved with some
care. Thus, when the harvest of fresh fruits
was over, there remained a hoard of these
dry, nutritious discharges which were ground
on the stone abut, winnowed in a shallow
basket and made into a meal to be eaten,
either dry, as a watery atole, or mixed with
turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems
of food-getting and of personal subsistence
have been of particular interest, the lost
social customs of the tribe deserve a mo-
ment's attention. Before the death of all
but a few of the 2,000-3,000 Seris at the
[161] hands of invading Spaniard and Mexican,
the tribe consisted of a number of conspic-
uous maternal clans, each of which was pre-
sided over by a zotic tutelary such as the
Pelican, the Turtle, the Rattlesnake, or the
Badger. The totemic symbols denoting the
various beast-gods and incidentally indicat-
ing the blood-carriers of clans dedicated to
302 them, consisted of elaborate designs painted
386 upon the face (Fig. 10). In accord with
614 their savagery in which the social organiza-
tion was based on blood kinship reckoned in
the female line, under ordinary circum-
stances, the faces only of the females were
painted. Colored minerals pounded to
powder afforded the pigments for the paint-

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FIG. 12. SERI MOTHER AND BARE
SERI MOTHERS COMMONLY HAVE TOO MUCH MILK AND
FREQUENTLY RELIEVE THEMSELVES BY SUCKLING AN
ORPHANED PUPPY OR SOMETIMES EVEN A BABY POR.

302 ing, and were carried in cane tubs. The
386 paints were carefully prepared, applied, and
614 preserved, and, as indispensable feminine
accompaniments even on the longest jour-
neys, were among the most highly prized of
the people's possessions. The importance of
the face-painting custom, established in the
old tribal life, remained strong even as the
slaughter of the warring tribe progressed

[p. 201(B)]

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?anterj kóil* "blue clay" of their own manufacture.¹

The components and the method of manufacture of *?anterj kóil* are said to have been taught to the women long ago by *?ant i?akim?roj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

?anterj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?anterj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

The three ingredients used in making the blue clay are the root bark of *zkoktz* (*Franseria dumosa*), *iki kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óorW* "excrement (sap) of *mókni* (*Guaiacum coulteri*). The Seri say that the *iki kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl* (*Franseria ambrosioides* Cav.) or of *znæejan siiktoj* (*Stegnospermum halimifolium*) can be used instead of *zkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.

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Recently I observed the manufacture of *?antezj kóil* in Desemboque, Sonora. Although the woman involved normally makes the clay in complete privacy, she agreed to let me watch. Seven young men and two young women were near a fire outside her hut as she seated herself on the ground behind a water drum. As she began to work she cautioned them not to watch.³

She commenced by scraping several roots of *akoktz* to remove any dirt and then moistened them with water. Using a *mano* and *metate*, she split the bark and removed it. The rest of the root was discarded. She then pounded the bark into a pulp, moistening it at the same time with more water (Fig. 1). This pulp was put in a cup and set to one side.³

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Next she ground several small chunks of *iki kóizj* into a fine powder. Then she placed a piece of hard *mokni óoxW*, the size of a marble, on the white powder. At this point she told her daughter, one of the two young women, to bring her a clean white rag and a blanket. After again warning the young people to stay away, she covered herself and her *metate* with the blanket, leaving only a small opening by her shoulder through which I could observe. The warning was heeded by all of the youths except the daughter who came over once to take a peek. The group remained interested, and several times someone asked, "Is it blue yet?"

Beneath the blanket, the woman ground the *mokni óoxW* into the *iki kóizj*, mixing the powders thoroughly. After scraping the mixture to one side of the *metate*, she wrapped the bark pulp in the white cloth and squeezed approximately a teaspoonful of liquid onto the center of the stone. Then she combined some of the powder with the liquid and ground the resultant paste for about ten minutes. As necessary, she added more powder or liquid to the mixture. Finally she daubed a streak of the clay onto the back of her hand, withdrew her hand into the sunlight, and remarked that it was beginning to turn blue. At that time it was a grayish-blue. She continued to work for several more minutes and then tested the color again. This time she seemed satisfied that it was the right shade. It was now a bright, or as she put it, a strong blue. This was the *?antezj kóil*, the prized blue pigment (Fig. 2).

The making of the *?antezj kóil* is followed immediately by the making of a second portion of clay, called *?a?óoskl*, which is a lighter shade of blue. Thus its name, the root meaning of which is "drab or grayish." *?a?óoskl* is considered to be inferior to the *?antezj kóil*. After the woman had scraped the finished *?antezj kóil* from the *metate* and *mano* and transferred it to a saucer, she added more ground *iki kóizj* to the small amount of remaining

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FIG. 1. Crushing the root bark of *rkoktz* (*Franseria dumosa*), to a pulp. Note the pieces of root in the left foreground, the little pieces of *mókni óorw* sap (*Guaiacum coulteri*) in the center foreground, and the chunks of mineral in the right foreground.

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FIG. 2. The first or brighter batch of blue pigment, *?anterj kóil*.

- 386 powder mixture and combined this with the blue clay remains on the metate. She then squeezed a few more drops of liquid from the cloth-covered bark pulp onto the powder and resumed the grinding and mixing. After working several minutes she scraped up the second batch of clay and placed it opposite the ?antezj kóil on the saucer. Only then did she drop the blanket and display the results of her work. The pastes were soft and sticky, and the difference in the shades of blue was noticeable. She said that on the following day she would form the clay into the proper shapes.

The next day she kneaded and molded each of the two masses, which by that time had dried enough to be workable. She molded the ?antezj kóil into two capsule-shaped pieces, each about an inch long and tapered at both ends. The ?a?óoskl she molded into a disk about one-fourth inch thick and almost an inch in diameter (Fig. 3). The different shape permits it to be distinguished from the ?antezj kóil. Although both blues are made at a single sitting, the process is spoken of only as "making ?antezj kóil."



FIG. 3. The two capsule shaped pellets are ?antezj kóil. The disk-shaped pellet is ?a?óoskl.

To use the clay as paint, a bit of water is placed on a stone and the clay is rubbed into it to make a paste. It is then applied to the face (Fig. 4). It spreads smoothly and adheres firmly to the skin. The blue was formerly used for decorating pottery, clay figurines, headdresses, fetishes, arrows, wrist guards, and cane gaming sticks, as well as for face painting. In curing the sick, the shaman sometimes used the blue for painting crosses on the patient's chest. Also, women made necklaces using beads formed from the blue clay.



FIG. 4. Painting the face with the finished pigment.

ACKNOWLEDGMENTS

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I am indebted to Richard Felger, Department of Zoology, University of Arizona, for information concerning plants referred to in this article. H. Wesley Peirce of the Arizona Bureau of Mines identified the mineral material used in the pigment.

NOTES

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1. The phonetic values of the symbols used are the following: t is voiceless dental stop; k is vl. velar stop; ʔ is glottal stop; W is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

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2. The restriction as stated to me by various women pertains only to young girls below the age of menarche. Actually, however, none of the above-mentioned young men and women, most of them in their twenties, was allowed to observe.

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3. Plant specimens are deposited in the Herbarium of The University of Arizona.

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4. The blue "pencil" which McGee describes (McGee 1898: 186) and pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the *antetzj kóil*.

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